Claims

1. Method for applying divisions (23, 24, 25, 48, 49) to
    a slide plane (22, 29) of a glide block blank (47),
5   comprising the following process steps:
    - prior fabrication of a base surface (26) of the
    slide plane (22, 29) of the guide block blank (47);
    - supply of a material to be applied (41, 42, 45) to
    the base surface (26);
10 - local fusion of the material (41, 42, 45) supplied
    by means of a local non-contact heat input (35);
    - production of specific geometries of the
    divisions (23, 24, 25, 48, 49) by moving the guide
    block blank (47) and/or a beam (35) of the heat
15 input (34) relative to one another; and
    - levelling of the abutment face of the fused
    material (41, 42, 45) to produce a flat abutment face
    of the slide plane (22, 29).

20 2. Method for forming divisions according to claim 1,
    characterised in that the heat input takes place in a
    non-contact manner by means of a laser beam (35).

3. Method for forming divisions according to claim 1,
25 characterised in that the heat input takes place in a
    non-contact manner by means of an electron beam.

4. Method for forming divisions according to claim 1,
    characterised in that the heat input takes place in a
30 non-contact manner by means of a plasma beam.

5.   Method for forming divisions according to any one of
        claims 1 to 4, characterised in that the material (41,
        42, 45) to be applied is supplied as a powder (41).

6.   Method for forming divisions according to claim 5,
        characterised in that the excess powder (41) after
        fusion is blown or poured off.

7.   Method for forming divisions according to any one of
        claims 1 to 4, characterised in that the material (41,
        42, 45) to be applied is supplied as wire (42).

8.   Method for forming divisions according to claim 7,
        characterised in that for supplying the wire (42) a
        feed device (50) which feeds a free end (54) of the
        wire (42) to the area of the heat input is provided.

9.   Method for forming divisions according to claim 7,
        characterised in that a winding device (43, 43') is
        provided for supplying the wire (42) and a part of the
        wire material (42) is fused on in the area of the free
        length of wire stretched by the winding device (43,
        43').

10.   Method for forming divisions according to any one of
        claims 1 to 4, characterised in that the material (41,
        42, 45) to be applied is supplied as strip (45).

11.   Method for forming divisions according to claim 10,
        characterised in that a winding device (44, 44') is
        provided for feeding the strip (45) and a part of the
        strip material (45) is fused on in the area of the

free length of strip stretched by the winding device (44, 44').

12. Method for forming divisions according to claim 11, characterised in that the width of the strip material (45) is greater than the maximum extension of the divisions (23, 24, 25) to be formed.

13. Method for forming divisions according to any one of claims 1 to 12, characterised in that the divisions (23, 24, 25) are formed on a slide face (22) of the guide block blank (47).

14. Method for forming divisions according to any one of claims 1 to 13, characterised in that the divisions (48, 49) are formed on an annular face (29) of the guide block blank (47) oriented oppositely to a slide face (22).

15. Method for forming divisions according to any one of claims 1 to 14, characterised in that the material (41, 42, 45) to be applied is a plastics material.

16. Method for forming divisions according to any one of claims 1 to 14, characterised in that the material (41, 42, 45) to be applied is a non-ferrous metal.

17. Method for forming divisions according to any one of claims 1 to 14, characterised in that the material (41, 42, 45) to be applied is a ceramic material.

18. Guide block of a hydrostatic piston machine, the guide block (15) having at least one slide plane (22, 29) on which divisions (23, 24, 25, 48, 49) are arranged as

5   elevations, characterised in that the divisions (23, 24, 25, 48, 49) are formed by local fusion of a supplied material (41, 42, 45) generated by means of a non-contact heat input.